



Office
 (620) 588-4250 212 Main St. • P.O. Box 215 • Claflin, KS 67525
 Home
 (620) 587-3444

James C. Musgrove
 Petroleum Geologist

GEOLOGIST'S REPORT

DRILLING TIME AND SAMPLE LOG

COMPANY LD Drilling

LEASE Barnes #1-21

FIELD _____

LOCATION SE-NW-SE-NW (1882' ENL'S 1864' FW)

SEC 21 TWP 18S RGE 14W

COUNTY Barton STATE Kansas

CONTRACTOR Petromark (rig #2)

SPUD 11/1/14 COMP 11/10/14

RTD 3463 LTD 3457

MUD UP 2700 TYPE MUD Chemical displaced

SAMPLES SAVED FROM 2800

DRILLING TIME KEPT FROM 2800

SAMPLES EXAMINED FROM 2800

GEOLOGICAL SUPERVISION FROM 3100

GEOLOGIST ON WELL Jim Musgrove 2800-3300 Kurt Talbott 3300-RTD

FORMATION TOPS	LOG	SAMPLES
Anhydrite	895 +1036	RTD 3463 -1532
Basal anhydrite	920 +1011	RTD 3457 -1526
Topeka	2886 -955	
Lechner	3120 -1189	
Toronto	3129 -1198	
Douglas	3148 -1217	
Brown Lime	3193 -1262	
Mansing	3201 -1270	
Base Kansas City	3405 -1474	
Chimney Rock	3417 -1486	
Arbuckle	3451 -1520	

ELEVATIONS

KB 1931

DF _____

GL 1926

Measurements Are All From -KB-

SURFACE CASING 8981' 914

PRODUCTION 5 1/2" 3462

ELECTRICAL SURVEYS

By Nabors, Dual induction, compensated dens./norm, micro

TO _____

TO RTD

TO 3463

TO _____

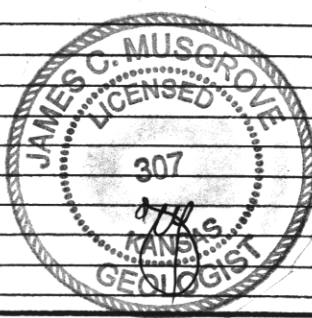
REMARKS

Recommendations, 5 1/2" production casing was set & cemented in the Barnes #1-21.


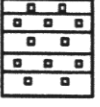
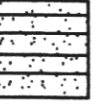


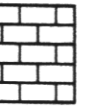
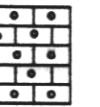
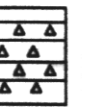

Respectfully submitted

James C. Musgrove & Kurt Talbott

Petroleum Geologists



LEGEND

- 
Anhydrite
- 
Salt
- 
Sandstone
- 
Shale
- 
Carb sh
- 
Limestone
- 
Ool. Lime
- 
Chert
- 
Dolomite

DRILLING TIME
 Logarithmic Scale)

DEPTH

207 / 207

.5 1 2 3 4 5 10 15 20 30

SAMPLE DESCRIPTIONS

REMARKS

20

40

60

80

2960

20

40

60

80

3000

lt grey dk grey, cherty -
dense

grey }
greyish green
silty sh.

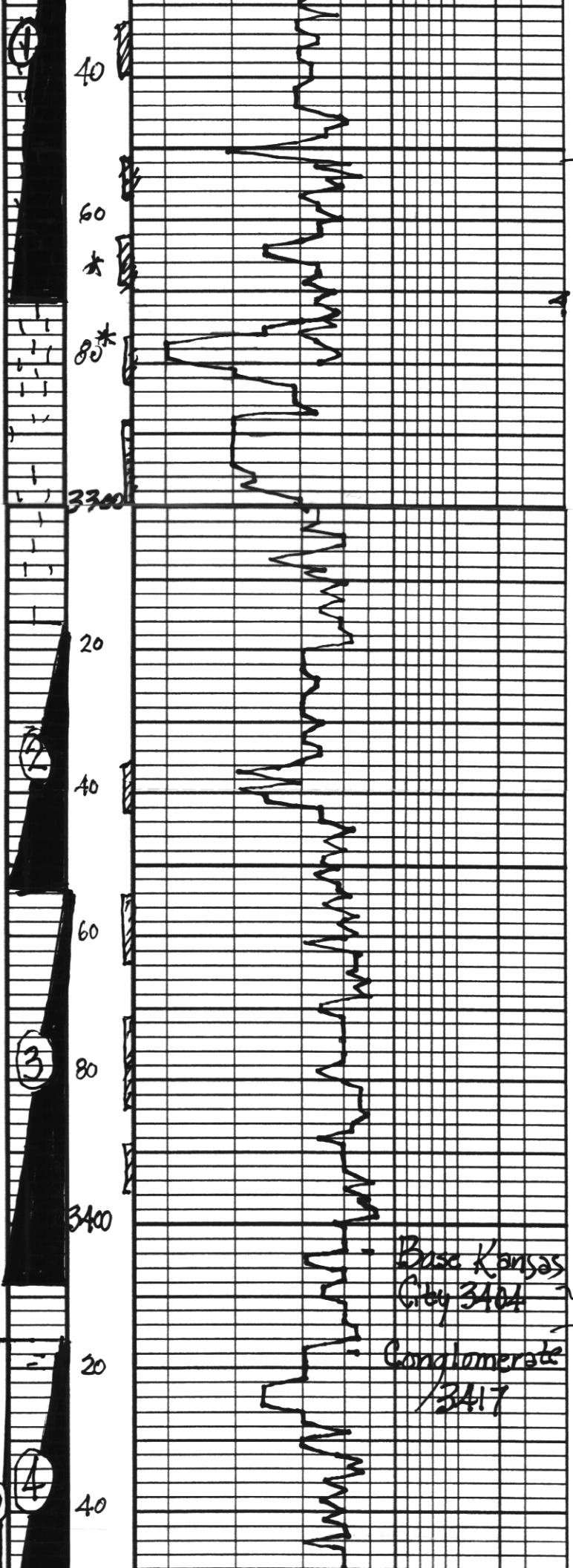
openka

lt tan/grey, (x.t.) few
green fossils, poor fr g
mfs

dark, few sh
fin wh/grey d

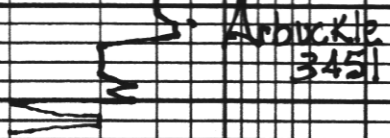
blk carb sh

grey/green sh



Sperry Portland Cement - poor dev's m/s	
ls, gray, (ool), v. h. clay	odor
dsc, ??? stn nsfo; ??? odor	}
gray/bk sh.	}
ls, gray/wh; ool; Chalky; Jr. brown stn, wk sfo; ??? odor	odor
ls, gray; crm; oom; fr. oom; Jr. bk/brown stn; Jr. fo; sfo; odor	}
???	
dsc; a.o.; brown splty stn; nsfo; sfo; odor	odor
ls, crm; oom; foss; sub-oom; poor stn; nsfo; fair odor	
	Dst # 1 3204-3271 20-20-20-20 Blow, weak (died 10 Rec; 20' mud (mins) Pressures; Isip 222 psi Isip 78 Ifp 23-28 FFP 33-36 NSH 1545-1527
ls, crm/wh; sfo; ool; fr. muddy; oom; good stn; sfo; sfo; good odor	
???	
ls, wh/gray; ool; chalky; sfo; ool; Jr. poor stn; nsfo; no odor	Dst # 2 3316-3353 30-30-60-60 Blow, weak (1 1/2" 2nd opening); fair (4") Rec; 500' gas in pipe 40' gassy mud cut oil (20% gas; 25% mud; 55% oil) pressures; Isip 180 psi Isip 180 Ifp 35-37 FFP 27-37 NSH 1591-1570
ls, crm/wh; ool; poor vis; dk brown stn; sfo; sfo; odor	
Jr. bk/gray stn	
ls, crm/om; ool/foss; partly dev's; Jr. brown stn; Jr. fo; no odor	
gray/mar/green sh	
ls, wh; chalky -> dy (dense)	
v.c. soft sh	Dst # 3 3354-3408 30-45-45-60 Blow, weak (2") Rec; 60' gas in pipe 120' gassy muddy oil (20% gas; 100% oil)
???	
Jr. wh; dense ls; sh ool	
Jr. wh/orange A	
???	

Base Kansas City 3404
Conglomerate 3417



Archie 12
3451

RTO 3463

~ dol, wh, f med xl) fr. IX 20
dk. brown stn, sfo, good odor

~ dol, wh, med xl, few coarse
xl) fr. good IX 20. dk brown
stn, sfo, ft. odor

(1000) 4010 mud)
4070 oil)
Pressures) ISIP 572 PSI
fs: P 557
IJP 19-46
fJP 64-68
MSH
1652-1605
PS

DSE #5 3416-3463
30-30-45-45

Blow, weak (3")

REG, 2.50 very slightly
oil cut muddy water
(29% oil; 25% mud;
44% water)

pressures:
ISIP 1074 PSI
fsip 1074
IJP 19-19
fJP 83-122
MSH 1642-1647 PSI

DSE #4 3416
- 3450
30-30-30-30

Blow, weak (1/2")
Rec) 65' oil specked
mud

pressures: ISIP 686 PSI
fs: P 571
IJP 27-41
fJP 43-56
MSH
1672
- 1624 PSI